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# Journal of the Society of Arts.

FRIDAY, APRIL 13, 1866.

## Announcements by the Council.

### ORDINARY MEETINGS.

Wednesday Evenings, at Eight o'Clock :—

APRIL 18.—“On the Diseases of Meat as affecting the Health of the People.” By Dr. THUDICHUM. On this evening Professor OWEN, F.R.S., will preside.

APRIL 25.—“On the Perils of Mining, and their possible Cure.” By JAMEZ HOGG, Esq.

### CANTOR LECTURES.

The following is the syllabus of a course of four lectures “On the Synthesis and Production of Organic Substances by Artificial Means, and the Applications which some of them receive in Manufactures,” to be delivered by Dr. F. CRACE CALVERT, F.R.S., as follows :—

#### LECTURE I.—FRIDAY, APRIL 13TH.

##### “ON THE SYNTHESIS OF ORGANIC SUBSTANCES.”

The direct formation of *acetylene* (the most illuminating compound of coal gas), of *formic acid* (the acid of ants), and of *alcohol* (spirits of wine) from mineral compounds. The transformation of *acetylene* into *olefiant gas*, of *formic acid* into *marsh gas* (fire-damp), of *alcohol* into *acetic acid*, and of these substances again into *benzol*, *phenol*, and *naphthalin* (products obtained from coal tar), and of *marsh gas* into *acetylene* and *benzol*, &c., &c., &c.

#### LECTURE II.—FRIDAY, APRIL 20TH.

##### “ON THE TRANSFORMATION OF NEUTRAL SUBSTANCES.”

On the transformation of *starch* into *cane* and *grape sugars*, and also *pectic acid* (with remarks on the ripening of fruits and the production of jellies). On the transformation of *sugar* into *alcohol*, *ether*, *aldehyde*, *acetic*, *formic*, *prussic*, *oxalic*, and *butyric acids* (the acid of rancid butter), and also the conversion of *sugar* into *mannite* (obtained also from manna), and into *lactic acid* (acid existing in the blood and flesh of animals, and also in sour milk).

#### LECTURE III.—FRIDAY, APRIL 27TH.

##### “ON THE TRANSFORMATION OF ORGANIC ACIDS AND ANIMAL SUBSTANCES.”

The artificial production of *benzoic acid* (found in benzoin resin) from the essence of *bitter almonds* and from *coal tar* products, and its conversion into *hippuric acid* (found in the secretion of herbivorous animals); of *tartaric acid* (the acid characterising cream of tartar), from *sugar of milk* and from *succinic acid* (the acid obtainable from amber), and its decomposition into *oxalic* and *acetic acids*.—On the transformation of *citric acid* (the acid of lemons and oranges) into *aconitic acid* (found in wolfsbane).—On the transformation of *malic acid* (which characterises the acid flavour of green gooseberries, apples, and rhubarb) into *fumaric acid* (the acid of common fumitory) and also into *equisetie acid* (the acid found in the marsh horsetail), and, lastly, into *asparagine* (the body found in asparagus and potatoes).—On the transformation of *uric*, *cyanuric*, and *cyanic acids* into *allantoin* (the substance found in the allantoid fluid of cows).—On the artificial production of *urea* (a substance which characterises the liquid secretions of man and of many other animals).

### LECTURE IV.—FRIDAY, MAY 4TH.

#### “ON THE ARTIFICIAL PRODUCTION OF AROMATIC SUBSTANCES.”

On the transformation of *salicine* (the bitter principle of the willow and poplar) into the essential oil of *meadowsweet*, *coumarin*, and of the *tonquin-bean*.—On *salicylic acid* and the artificial production of the fragrant essential oil of the *wintergreen*, or *gaultheria*.—On the transformation of *indigo*, the oil of potatoes, and that of *camomile* into *valerianic acid* (the acid which characterises the odour of valerian-root; the berries of the common guelder-rose; the oil of the fish porpoise, and of certain kinds of cheese).—On the conversion of *essence of turpentine* into *camphor*; of the essential oil of *mustard* into that of *garlic*, &c., &c., &c.

The lectures will commence at eight o'clock, and are open to members, each of whom has the privilege of introducing one friend to each lecture.

### ART WORKMANSHIP PRIZES FOR 1866-7.

The Council have decided to enlarge the basis on which artisans may compete for prizes for Art Workmanship, and have passed the following resolutions :—

Any producer will be at liberty to exhibit, either in his own name, or through his workmen, any work or works as specimens of good workmanship in the classes given below, provided that the work or works be accompanied with a statement of the name or names of the artisans who have executed their respective portions; and if the work or works be sufficiently meritorious to deserve them, extra prizes will be given to the artisans who have executed them.

Artisans may, if they think fit, exhibit works executed by them after other designs, in any of the above-mentioned classes. Such works may contain the whole or portions of the prescribed designs, and must be of a similar style and character. Competitors must specify the class in which they exhibit. Extra prizes will be awarded.

The works submitted must be delivered at the Society's House on or before the 22nd December, and will be exhibited at the Society's house, and afterwards at the South Kensington Museum. A selection of the best works will be made and sent to the Paris Exhibition of 1867.

The Classes will be as follows :—

#### FIRST DIVISION.

##### WORKS TO BE EXECUTED FROM PRESCRIBED DESIGNS.

- CLASS 1.—Carving in Marble, Stone, or Wood.
- CLASS 2.—Repoussé Work in any Metal.
- CLASS 3.—Hammered Work, in Iron, Brass, or Copper.
- CLASS 4.—Carving in Ivory.
- CLASS 5.—Chasing in Bronze.
- CLASS 6.—Etching and Engraving on Metal—Niello Work.
- CLASS 7.—Enamel Painting on Copper or Gold.
- CLASS 8.—Painting on Porcelain.
- CLASS 9.—Decorative Painting.
- CLASS 10.—Inlays in Wood (Marquetry, or Buhl), Ivory or Metal.
- CLASS 11.—Cameo Cutting.
- CLASS 12.—Engraving on Glass.
- CLASS 13.—Wall Mosaics.
- CLASS 14.—Gem Engraving.
- CLASS 15.—Die Sinking.
- CLASS 16.—Glass Blowing.
- CLASS 17.—Bookbinding and Leather Work.
- CLASS 18.—Embroidery.
- CLASS 19.—Illuminating.

## SECOND DIVISION.

WORKS TO BE EXECUTED WITHOUT PRESCRIBED DESIGNS.

CLASS 20.—Modelling.

CLASS 21.—Wood Carving.

Except in Classes 1, 2, and 4, the subjects will remain as in the list already issued; but in Classes 1, 2, and 4, other subjects will be given, particulars of which will be duly announced.

## Proceedings of the Society.

## EIGHTEENTH ORDINARY MEETING.

Wednesday, April 11th, 1866; William Hawes, Esq., F.G.S., Chairman of Council, in the chair.

The following candidates were proposed for election as members of the Society:—

Brinsmead, John, 4, Wigmore-street, W.  
Ellis, Charles Nicholson, 9, Tredegar-square, Bow, E.  
Glover, George, Ranelagh-road, Pimlico, S.W.  
Glover, George Raleigh, Ranelagh-road, Pimlico, S.W.  
Head, John, Mill-street, Kidderminster.  
Holdich, William, 105, Fleet-street, E.C.  
Niemann, E. J., 19, Charlotte-street, Bedford-sq., W.C.  
Pim, Jonathan, 22, William-street, Dublin.  
Templeton, James, 7, Woodside-crescent, Glasgow.  
Wilson, John C., 5, Lime-street, E.C.

The following candidates were balloted for, and duly elected members of the Society:—

Alison, A., 41, York-terrace, Regent's-park, N.W.  
Bush, William John, 30, Liverpool-street, E.C.  
Davis, E. J., Globe Wharf, Mile-end, E.  
Fentum, Martin, 85, New Bond-street, W.

The Paper read was—

## ON THE PIRACY OF TRADE MARKS.

By E. M. UNDERDOWN, Esq., BARRISTER-AT-LAW.

I have been requested to read a paper upon the subject of "Trade Marks" to the members of the Society of Arts, and I imagine that the Society is discharging one of its most important functions in investigating any mode by which the legitimate development of skilled industry is encouraged, and the public protected from the results of that lawless competition of unprincipled traders and manufacturers which, like a parasitical growth of weeds, at once destroys the fruits of honest industry and skill, and substitutes for them the noxious and useless produce of fraud and deceit.

A French writer\* has well remarked that "Side by side with the development of industry, and with the place which it takes daily in the elements of general prosperity, a guilty speculation is seen to develop itself simultaneously, multifarious in the means it employs, and varied as are the contrivances of bad faith, but one and identical in its object, which is that of gathering the fruits of the labours of others. Jurisprudence, at first hesitating and uncertain as to enterprises of this novel species of piracy, has become gradually bolder as the progress of the evil manifested itself." A French motto well expresses the trader's true rights and responsibilities—" *A chacun les bénéfices et la responsabilité de ses ouvrages*," and it is of the highest importance, before proceeding further with the subject, that both lawyers and laymen should understand that the old principle of the law, "*caveat emptor*," is, in modern times, almost wholly inapplicable. How can the buyer of drugs, of cutlery,

guns, metals, lime juice, potted meats, ground coffee, sugar, flour, bread, bottled ale, judge of either adulteration or genuineness? When the sick man is dead, the hunter's arm blown off, the scurvy sailor committed to the waves, the arctic voyager starved—is it then to be said, "*caveat emptor*," the buyer should have known better? No one seriously can contend for this. We know that in many cases it has for ages been found useless to adhere to this one-sided maxim; that the precious metals, weights and measures, proof of fire-arms, and other matters considered of public importance, have been required to be marked in a manner set out by the legislature, and the observance of these formalities enforced by legislative sanction.

From what then arises the great indisposition to make the marking of merchandise obedient to such laws as may secure to the *trader* the reputation of his skill and honesty, and to the *purchaser* the power of enforcing the fulfilment of that responsibility undertaken by the offering of the goods and the acceptance of the price,—in short, that *warranty* which the English law is so chary of enforcing? My friend Mr. Robertson Blaine, to whom I am exceedingly indebted for suggestions, has remarked to me, what indeed had forced itself upon me in formerly studying the Roman jurisprudence, that our system of law being founded upon custom, and that custom the custom of barbarous nations, admirable as it is and always has been for the preservation of personal liberty, is, in what relates to commercial matters, even now of the rudest description, and accommodates itself to the complicated requirements of modern commerce with far greater difficulty than the law of France, which having for its basis the highly organised law of the Romans,—has again been codified under the circumstances and with the experience of modern times, and is governed throughout by logical principles, expressed with a clearness to which unfortunately our legal diction is a stranger. Not for a moment would I yield any of our great legal principles in which the French law is wholly wanting, but in modern law-making, as in the case of company and partnership law, we have with infinite advantage borrowed much from their legists, and when we shall have availed ourselves of their experience and remodelled the law with regard to commercial frauds and the principles which ought to govern commercial contracts, we shall have made a great step.

I shall endeavour to show this, knowing that the "marking of merchandise," in other words the "trade mark," its protection, and the responsibilities its use does and ought to involve, will go far to rescue our commercial system from the abyss of fraud into which it has fallen, as well as to protect the public from those injuries which the present condition of the law (although lately much improved) so imperfectly provides against.

It will be necessary for us to inquire:—

1. What is a trade mark; who should use it; what purposes it does and should serve; what property may be had in it, and what is the value of that property?
2. Should its application be compulsory or permissive?
3. What piracies are committed; for what purposes; and with what results to the proprietors and the public?
4. How is the trade mark protected:—by the common law of the country; by statute law; by the decision of the Court of Chancery?
5. Should it be registered:—if so, in what way; how should existing rights be protected?

The accurate definition of a *Trade Mark* properly so-called, is of the highest importance to the due understanding the subject and its difficulties.

It is, then, any mark, name, figure, letter, or device employed to denote that any article of trade, manufacture, or merchandize, is of the manufacture, workmanship, production, or merchandize, of the person using it with or upon his goods. It must be then only for the purposes of trade. It may be placed upon the goods by any person whose "merchandize" they may be said to be, *i.e.*, the maker may use his mark,

the wholesale dealer his, and the retail dealer his, as long as such use of each is confined to the securing by some outward symbol what the French call *Achalandage*, and we, less accurately, "custom," that is, the mutual relation of trader and customer, established on the one hand by the supply of good articles, and on the other by the satisfaction of being well served, and does not convey or seek to convey any false representation. And here it must not be forgotten that there is no monopoly in the strict sense of the word. A monopoly is the giving to one person, either by statute or royal grant, a privilege solely to use or profit by that which by the general law should be the right of all; for instance, in the time of Elizabeth, the Earl of Essex's monopoly of the sale of sweet wines; the assaying and stamping of metals to the Goldsmiths' Company; the right, for the encouragement of inventors and men of letters and genius, to the profits, for a certain time, of inventions, books and works of art, given by letters patent and the copyright Acts.

But the use of a trade mark is no monopoly, any more than my name is a monopoly, because no other man has a right to assume it for the purpose of persuading the world that he is myself. A trade mark is to denote clearly who makes or sells the goods, and the use of such a mark by another is simply a lie and a fraud, and, as it has been before said, an attempt to reap the fruits which others have planted. This, strange to say, has hitherto been more protected than checked by our rulers in commercial matters.

It has been said, indeed, that the sole right to use a lion, or an eagle, is in some sort a monopoly; but then if the eagle is not the sole right of one person, of what use is it as a distinctive mark? It may, indeed, happen that several manufacturers have used an eagle, and by the common excellence of their manufacture, made it a mark which will sell their goods here and abroad. In that case, let them all use it; but I cannot help thinking that were there not some eagle which denoted a higher flight of excellence, other birds would not be anxious to deck themselves with the plumes; and we may safely leave it to time to show whether the real eagle will not be anxious to assert his independence. Designs or marks have been found preferable to names (though the latter may be trade marks), as being more conspicuous, and also from the fact that so many persons have like names.

The public, it may be thought, would be better protected were it made compulsory upon every man to place a mark denoting his manufacture upon his goods, and thus render himself responsible for their quality; but this argument is strongly combated not only upon the ground of convenience, but because in practice, if the mark is rendered permissive and, when adopted, well protected, it will be the interest of the honest trader by all means in his power to identify his own goods, and the public will be sufficiently secured by the principles of competition and self-interest. We thus come to the question as to the value of a trade mark, and we can all pretty well judge of that from the anxiety to adopt known symbols of great firms, but there is one value which known marks have, being more taking with uneducated persons and the natives of foreign countries than names, that is, their power of selling goods abroad and in the colonies, and it is there that frauds are practised to the greatest extent, some of which I shall presently point out. And here will be an appropriate place for me to mention that it is of equal importance to the consumer as to the trader, that the merchant or wholesale dealer should be encouraged to affix his trade mark to goods imported or exported by him, as an additional guarantee that they are what they profess to be, and that his known care in their selection and purchase gives his mark upon them a value intrinsically, which entitles him to the improved price the consumers will be ready to pay for such guarantee.

I shall have to call the attention of the Society to some remarkable facts which of themselves will show the enormous

interest the public have in this question; for I cannot impress it too strongly upon the minds of members that the protection of trade marks is not a manufacturer's question solely, nor, when accurately examined, will it be found to be even primarily so.

The buyer wishes to obtain an article similar to other articles which, by his own experience and that of others, have been found of superior excellence; those articles, he knows, are marked with a cross, a pyramid, or a capital T, of well-known shape and colour; he buys the article so marked, and finds that it is inferior in quality, and that the sham mark was a puff. Here both are defrauded: the manufacturer, who has lost the sale of his goods for which he has obtained reputation; the buyer, who has got the wrong article. If the article is of equal goodness then the buyer may be said to be only deceived, but the manufacturer is defrauded. But how often will the latter happen? Does it not stand to reason that he who is dishonest as to the description, will be dishonest as to the quality? It is, I believe, a fact, that at least half the trade in manufactured articles is, to greater or less extent, fraudulent. To such an extent have the adulterations of food and even medicines been carried, that it may safely be said that it is practically impossible to obtain some varieties of them pure.

Flour, bread, sugar, sweetmeats, cocoa, coffee, tea, ales, gin, especially all the liquors sold at public-houses—wine—are all adulterated. Indeed one of the most prolific of the wine-growing countries is the free city of Hamburg, whence come, strangely enough, most of the sherries, ignorantly supposed to be the produce of Cadiz and Xeres; and the fine old crusted Oporto, whose only claim to the name it bears is that it is yielded by the most dishonest of all "Ports," which so well keeps up its right to have originated the word humbug. Drugs and medicines may also be included—two of the most wicked frauds with regard to which have been perpetrated lately—that of selling sham vaccine matter for use in the cattle plague, and another, which in atrocity can hardly be paralleled—the sale of sulphuric acid and other ingredients for lime juice for use on board ship, the only cure for that horrible disease, scurvy, which, unfortunately, from this and other causes, has lately increased to a frightful extent among our sailors.

Does not the law, which so imperfectly guards against these manifold evils, require speedy and effectual reform?

I was a few days ago informed by a gentleman of considerable experience in mercantile matters in Australia that the frauds upon a great brewery firm, in respect of their trade mark, decreased the demand for their ales in Australia to an enormous extent within a very short time. Purchasers asked for ales with their well-known brand, found that the ale did not correspond to the mark, and ceased to buy it. Here you have an instance of an almost national trade being destroyed; yet for years no steps were taken to protect the colonists and the merchants from such results.

[Several instances of piracies were here exhibited.]

I have in the first part of this paper adverted to the evils to be cured, and now I will explain shortly the mode in which they should be dealt with. It is a well-known saying that you cannot make men good by Acts of Parliament, and that vehicles of the most portentous size can be driven through such acts. Still, if we can but put the drag on this coach, containing so many outside and inside passengers of indifferent character, we may do some good, and ultimately, if we cannot get the vehicle off the road altogether, we may prevent it from so much injuring the trade of the regular stage; indeed, I believe the opinion is daily strengthening, that well-considered prohibitory codes are the proper modes of dealing with crime of all kinds. The Indian penal code, chiefly drawn up by Macaulay, is one, perhaps, of the quietest but greatest services rendered by that illustrious man to the subjects of this empire.

ASTOUNDING as it may appear to some of you, it has gravely been held by our courts that a false representation of quality is no false pretence. Thus I may not sell you iron for steel, or copper for gold, but—as in the case of *R. v. Bryan*—I may tell you that spoons are equal to Elkington's A, which are merely lead silvered over, for, *caveat emptor*—let the buyer beware!

Before the Merchandise Marks Act, 1862, no offence was committed by marking on goods false statements of their quantity, quality, measure or weight, and that Act for the first time makes a statement of quantity or quality upon an article a warranty.

It is true that with regard to the cutlery trade, several Acts have been passed, and trade marks have long been registered in Hallamshire with the best results. The same as to proof marks of fire-arms, and the assay marks on plate, which are a species of trade mark and warranty under penalty. With regard to hops, a series of Acts of Parliament have been passed to render compulsory the marking upon hop sacks certain particulars of "date, parish, weight, &c.," but since the duty has been taken off, the attention of the excise has not been so narrowly called to the trade, and some of the marks have fallen into disuse, while at the same time prodigious frauds are perpetrated by the sale of foreign and other hops for Kentish, and with the Kentish horse imitated upon the sacks.

I have here a bill on the subject, drawn by my friend, Mr. Edward Besley, of the common law bar, which has been introduced by Mr. Huddleston, M.P. for Canterbury, and the second reading of which will be moved by him on the 19th. Its provisions are more stringent than those of the Merchandise Marks Act as to compulsory marking, and necessarily so. I have had the advantage of some discussion with Mr. Huddleston on the matter, and I think that his success with that bill, strengthened as his case is by a long course of previous legislation, will help to establish the necessity of continued action of Parliament on the matter of the marking of merchandize. The frauds so committed are principally as to the district, age, and quality of the hops, and, as in the Merchandise Marks bill, some mode is sought to provide remedies without the enormous expenses of a suit for injunctions or for an ordinary prosecution.

To meet these and similar frauds, and generally to amend the law, the Merchandise Marks Act, 1862, entitled, "An Act to amend the law relating to the fraudulent marking of merchandize," drawn by Mr. Hindmarch, after some difficulty was passed. For that Act we are greatly indebted to Mr. Roebuck, Mr. Bass, Mr. Milner Gibson, Mr. Hadfield, and, for the preparing of a first Bill, to Mr. Travers Smith, the eminent solicitor, under whose instructions I have acted in drawing an amending Bill, which has been considered by Mr. Poland, and will, we trust be introduced shortly into the House of Commons.

The latter Bill purports to re-enact the former Act in its entirety—it having been thought better to avoid any charge of innovation, which, when directed against fraud, seems to be so dangerous in the eyes of the Legislature—also, the provisions of an Act to prevent the use of Exhibition medals as a means of deception; and, finally, it provides for the registration of trade marks, which was omitted from the former Bill, and which would, if properly managed, go a long way towards rendering the protection of trade marks, and the suppression of frauds of a cognate description, practically complete.

The provisions of the Act are directed :—

1. Against falsely applying trade marks to goods, and the articles containing them.
2. Selling goods with false trade marks so applied.
3. Altering trade marks.
4. Information as to where false marks are procured must be given.
5. Against marking and selling articles with false indications of quantity, measure, or weight.

6. Sellers of articles are to be deemed to contract that the descriptions marked on them are true, and that the marks thereon are genuine.

7. Articles sold contrary to the Act may be destroyed.

8. All the civil rights of parties are preserved.

9. The most important provisions are those by which redress can be obtained shortly and speedily, by way of summary conviction before a magistrate; and this principle it is desirable to carry to its full extent, for no legal remedy for fraud can be effectual which is not easy, speedy, and cheap.

Foreigners are protected equally with British subjects, and here I would remark that, as far as the public are concerned, this should be so, irrespective of reciprocity, for it little matters to me, if I am by a false trade mark induced to drink gooseberry instead of champagne, or buy wooden nutmegs for real ones, whether there be international reciprocity or not between this country and France or America.

I will now give you a sketch of the decisions affecting this question. Trade marks have been known and used in this country and others from time immemorial, and we must seek for the law affecting them in the decisions of the courts; for, as I shall show you, no general statute deals with them until the Act of 1862, which it is now proposed to enlarge and amend.

We find, in the time of Elizabeth (Popham's Reports, i. 43), that an action upon the case was brought in the Common Pleas by a clothier, that whereas he had gained great reputation for his making of his cloth, by reason whereof he had great utterance to his benefit and profit, and that he used to set his mark to his cloth, whereby it should be known to be his cloth, and another clothier perceiving it, used the same mark to his illmade cloth, on purpose to deceive him; and it was resolved that the action did well lie. In Croke, ii. 468, it is, however, stated that the action was brought by him who bought the cloth for this deceit, and held maintainable; so that it is doubtful by whom the action, in the opinion of the judges, should have been brought. The courts of law have there taken the view as stated in "Comyn's Digest."

The judgments of the courts of equity have undergone several changes, but the course they have taken has been gradually more and more in favour of the recognition of the property in a trade mark.

Lord Hardwicke, in "*Blanchard and Hill*," refused an injunction against the use of the mogul stamp on playing cards. In "*Mottley and Downman*," Lord Cottenham considers it necessary that the right at law should be established before equity could interfere. Again, in "*Clark and Freeman*," Sir James Clark was refused an injunction to restrain Freeman from selling "Sir James Clark's consumptive pills," on the ground that Sir James did not sell pills, and was not injured in a pecuniary sense. But some late cases, "*The Leather Cloth Company v. The American Leather Cloth Company*," which went to the House of Lords (33 *Law Journal*, ch. 199; 34 ditto, ch. 53), distinctly place the grounds of the courts' interference as property, besides establishing important principles with regard to trade marks; and, in "*Hall v. Barrows*" (33 *Law Journal*, ch. 204), it was decided that a trade mark is property, and is properly valued as part of the partnership stock of the firm; that it does not descend to the representatives of a partner as such; and that the jurisdiction of the court in the protection of trade marks rests on property, and that fraud in the defendant is not necessary for the exercise of that jurisdiction. In "*MacAndrew and Bassett*" (33 *Law Journal*, ch. 56), it was held that the name of a foreign province (Anatolia) upon liquorice may be a trade mark, though other persons might have procured the raw material from that province.

The essential qualities for constituting property in a trade mark are—first, that the mark has not been copied, and involves no false representation; secondly, that the article has become vendible in the market. In

this case my friend, Mr. Dundas Gardiner, was engaged, as well as in several cases respecting the sale of spurious champagnes as the produce of the vineyards of the famous Veuve Clicquot, and I trust the Society may have the advantage of some remarks thereupon from him.

In "*Seixo v. Provezende*" (*Law Reports*, I., ch. 193), it was decided by Lord Cranworth, last November, that no trader can adopt a trade mark so resembling that of another trader that persons purchasing with ordinary caution are likely to be misled, though they would not be misled if they saw the two marks side by side; nor can a trader, even with some claim to the mark or name, adopt a trade mark which will cause his goods to bear the same name in the market as those of a rival trader.

"*Ainsworth v. Walsley*" (*Law Reports*, I., ch. 519), was decided on the ground of absence of wilful misrepresentation on the part of the defendant, who had described certain thread as the manufacture of the plaintiff; it was also decided that the name of a manufacturer or a system of numbers adopted and used by him in order to designate goods of his make may be the subject of the same protection in equity as an ordinary trade mark.

In "*Standish v. Whitwell*," (*Times*, March 10,) which was a suit to restrain the infringement of the plaintiff's trade mark, an eagle upon iron, the defendants had innocently used the crest of an eagle upon iron manufactured by them. The injunction was granted, but without costs. Had registration existed, this suit would have been impossible. The defendants were not allowed to sell the iron so marked then remaining in their possession.

This matter is somewhat too technical for this paper, but will be found admirably discussed in Mr. Poland's edition of the "*Merchandize Marks Act, 1862*," published at the *Law Times* office, and in an equally valuable little treatise by Mr. Edward Lloyd, of Lincoln's-inn, explaining the subject from the equitable point of view, published at the *Solicitors' Journal* office, 59, Carey-street. Both authors complain that the difficulties of proving a fraudulent intention, and at law actual damage, deprive the Act of many of its advantages. It is hoped that the scheme of registration will render process for infringement of trade marks more easy and effectual, and I will endeavour to show how the scheme for registration, proposed in the Consolidation Bill which I have prepared, will tend towards so desirable an end.

Registration in itself is but one mode of creating and rendering public the evidence of title to any subject of property. It is a declaration of title, which, being uncontradicted by the world, is *prima facie* evidence that the claim to the property is well founded. It should, therefore, be public and notorious, certain, deliberate, giving time to all persons to protest against its being-made evidence against their rights. It should be accessible. It should be all found together so as to prevent simultaneous entries at different places, or the excuse of the wrong doer, that he only sought in one place while the entry was in another. It should be in hands above suspicion, and under the control of Government. It should be cheap and afford every facility for the decision of disputes and differences. And I wish to impress upon the Society the difference in point of principle, which I consider to be in favour of the registration of trade marks, as compared with other registrations.

Mortgages are registered in London and York to prevent people lending money on bad security. Bills of sale equally so. Ships, because from their nature it is advisable to give as much publicity as possible to their ownership. Land, to prevent disputes, and give a title from a fixed period. Books and copyright, for a similar purpose, to give evidence of a claim against the public for so many years.

But the essence of trade marks is publicity; the trader says to all the world:—Instead of writing my name, this is my *ensign*—my *escutcheon*. I value my individuality, and I inscribe it upon a public record, and claim the pro-

tection of the law for its use. Again, all persons willing to use trade marks lawfully have a right—as a penalty is attached to using one that is the property of another—to know if the mark they purpose to use has previously been adopted; and to all persons willing unlawfully to use the trade mark of others publicity is a warning, which, if they disregard, the mere act itself subjects them to a penalty. The public, moreover, will know that all honest traders will wish to identify themselves, and will look for the trade mark—will see if it purports to be registered—knowing that the false index of that fact is in itself a matter for the law to punish. The retail dealer now held to warrant that the mark is genuine, will at a glance see where and how he can verify the fact, and if he willfully or negligently omit to take reasonable precaution, he will rightly be subjected to a forfeiture.

The English purchaser will know that foreigners, lawfully using a mark abroad, can register it here, and claim protection for it, which in its turn protects him, the buyer, as he knows that another provision prevents the importation of goods with forged marks.

Our Government has experienced considerable difficulty in obtaining protection for English trade marks in foreign countries, some of which—Hamburg, for instance—refuse reciprocity distinctly upon the ground that no registration of marks exists in this country; a letter from Mr. Layard to that effect was read to the committee of this Society by Mr. Coxon; and as regards other countries, the additional protection which will be given to their subjects under this Bill would form an argument for reciprocity, when, as it may be hoped, our Government will adopt and endeavour to carry out some well considered scheme of international commercial relations with foreign countries, more especially those where at present our manufacturers are subject to most barefaced and extensive frauds. I may instance German and Dutch piracies of thread, needles, beer, cutlery, &c.; and, indeed, until our system has assumed a more definite form, and more clearly defined methods for the assertion and recognition of title, it is difficult to negotiate with foreign countries for substantial reciprocity of protection under their laws.

But the great use of the registration is to make the using of another's trade mark, duly registered, an offence. This is susceptible of the very easiest proof, and conviction will speedily follow; and these convictions are more dreaded by the dishonest trader than the most formidable chancery suit or action, which indeed are sometimes made advertisements of, and fail to effect any other object.

In providing a scheme of registration I have been careful to introduce as few novelties as possible. The registration of designs, of photographs, &c., has answered perfectly as a system of registration. The registry at Stationer's Hall enables any one among the millions of entries of books, &c., to be found in a few minutes. The Registry of Designs might with great advantage be made the foundation of the registry of trade marks. The machinery is ready and only requires extension. I have consulted with Captain Robertson, the registrar, and with Mr. Bowen, his able deputy, and there would appear to be no difficulty in establishing the system. Thus no new office would be created.

The mode of registration is laid down in the Bill, subject to alteration and to the directions of the Board of Trade as to fees, &c., &c.

The question of district registries has been considered, and they, I think, will be found unadvisable. The requisite documents can be sent by post to London, and the registry must be central, or it will lose its most important feature, that of being notice to all the world.

The classification of the kinds of merchandise is the most important part of the registrar's duties; if this is once well done, the marks will be clearly and accessibly ranked under each class. What their classes shall be, and what their subdivisions, will be a matter of detail not inserted in the Bill, but published in the Regulations which I pro-

pose shall be issued by the Office. The mode of classification might be under Roman letters up to 26, then italic letters, then old English, &c., and the entry numerically under each, so that if it be desired to cause them to be attached to the trade mark, the affix would be short and simple  $\frac{B}{24} \frac{N}{46}$  and so on. The registrar of designs has

adopted a most neat and ingenious method of marking upon the design or article the date, &c., of registry. A few words explanatory of the system of registration which I have marked out in the Bill, and I will leave the subject in the hands of the meeting.

The mode of determining whether a mark shall be placed on the register is simple enough. First, the registrar has to see if the mark is so like another that he may refuse to entertain the application; and this I peculiarly insist upon—the registrar must not be a mere machine. Against this the party may appeal. The registrar, if he receives the application, advertises it in the *Gazette* and such public paper or papers as are named in the regulations. Three months are given to objectors, who come in at a time and place. The registrar hears and decides. His decision, however, is not conclusive, and the parties may go to the courts and try their rights by appeal from his decision. The order of the court will then direct the registrar to make the entry, or the opposition being withdrawn, the registrar may enter. An entry can be expunged or varied by order of the Court of Chancery or a superior court of law. The unlawfully procuring a mark to be registered is made an offence. Using words or letters falsely denoting a trade mark which has not been registered to be a registered trade mark, is made an offence, and this, and the penalty against unlawful registration, I hold to be the great safeguards of the addition to the Act; for these reasons a trade mark without sign of registration will be *prima facie* of little value, as, although property in it will not thereby be lost, yet, until it be registered, no suit can be instituted for its infringement, and no penalty exacted for offences committed in using it by the owner of it. The remedies of third parties will remain intact. No excuse will be left to the pirate, and detection will speedily follow upon transmission of the forged mark to the real proprietor, whose address and description will be found in the register under the letter and number denoted on the mark.

But again, the great point is, that the falsification will be directly and speedily punishable, being capable of immediate and direct proof. It has been thought advisable, in order to clear the register, and provide for lapsed and disused trade marks, that re-registration may be called for by the Board of Trade at intervals of some years—say ten or fifteen. Clauses respecting the abandonment and surrender of trade marks will be introduced in committee. Foreigners may, of course, register their marks here, but, to avoid fraud, and not to imitate the bad example of the French, who allow registration in their country to override the rights of proprietors of English trade marks in France, if the mark has been used abroad, the party applying will have to show that he has complied with the proper formalities at what may be called the “domicile of the trade mark,” *i.e.*, the place of business where its use arises, and whence the goods purport to issue. A section of the Act defines what is possession of marks, and power to search for goods fraudulently marked, and false trade marks, in certain cases, should, I think, be given, though the feeling of the Legislature is against it.

In conclusion, the efforts which have been made in the direction of improving the system should be known. Mr. Johnson, of Castle-street, Holborn, to whose son, Mr. Edmund Johnson, I am indebted for much kind assistance, appears for many years to have devoted much time and labour to the subject. I find that, in 1848, a society was in existence for the mutual protection of manufacturers from the fraudulent imitation of their names, manufactures, and trade marks, with Messrs. Vallance and Vallance as solicitors,

who have, up to this time, shown great energy on the subject. Mr. Arthur Ryland, of Birmingham, has for many years been actively interested in the subject, and an association with similar objects was started in Birmingham last year, and action has been taken in large manufacturing towns, but the subject never seems to have been dealt with in a sufficiently comprehensive manner, except by the Select Committee of 1862, who postponed registration until it should be seen how the act operated. In 1859, Mr. Leone Levi read a paper to this Society, which fell into my hands after the completion of my own. The remarks of Sir Richard Bethell, who took the chair on that occasion, were very valuable, and in his subsequent position of Lord Chancellor he has given effect to his then expressed opinions. The Society of Arts took part with the Committee of Medal Holders for the Exhibitions of 1851 and 1862 (the honorary secretary to which was Mr. E. Johnson), of which the Medals Act was the result, prepared by myself and Mr. Poland, under the instructions of Mr. Travers Smith, but which was considerably altered by the Government before passing, and which it will be now sought in committee to amend as consolidated with the Bill I have before referred to. This Bill has also been recently deliberated upon by the Trade Marks Committee of this Society, whose suggestions have been most valuable, and who joined in a deputation of the Chambers of Commerce to Mr. Milner Gibson, President of the Board of Trade, who expressed himself favourable to the consideration of a measure with the object of providing a system of registration of trade marks, after hearing the remarks of the Chairman of the Sheffield Chamber. All I have to do then is to urge the necessity of united action to press upon the Government and the House the great necessity for this measure, and generally to use every effort to ameliorate the state of the law upon the great question of commercial fraud. I thank the Society for the honour it has done me in allowing me to read this paper.

#### DISCUSSION.

MR. EDMUND JOHNSON said, allusion having been made in the paper to the committee appointed by the Council of this Society to take action in this matter, he thought he might venture, having been in communication with a large number of the manufacturers of this country, to express their obligations to this Society for the hearty manner in which they had taken up this question. Notwithstanding the efforts made in various parts of the country for many years past, very little was done on the subject till the Parliamentary Committee was appointed, the result of which was the Act of 1862, which, although it had effected much, was yet incomplete. The present committee was composed of gentlemen representing different interests throughout the country, who were well acquainted with the subject, and who met here upon neutral ground, each stating his own grievance; the matter was then put into the hands of legal advisers to point out in what manner those grievances could be best redressed. The bill to which Mr. Underdown had referred had been considered by the committee, by whom it was brought under the notice of the President of the Board of Trade; and when the Government had got through a few of the more important questions they had now on hand, it was hoped they might be induced to undertake to carry this bill through Parliament. The measure was most important as affecting the interests of our foreign trade; for the first essential step towards getting for our manufacturers that protection abroad which was required was, that the question should be placed on a proper footing in this country. When this had been effected, the next step would be to do something towards international protection in reference to trade marks, and he had no doubt that this would be a matter of considerable difficulty and labour;



but if the committee succeeded in their objects, they would not regret the time and trouble they had given to the subject. The present mode of registration was most imperfect, being nothing more than the entry of a trade mark at Stationers' Hall, like the entry of the title of a book, by which it was merely secured under the form of the copyright of a book. The specimens of fraudulent imitations of labels brought before them by Mr. Underdown this evening were very numerous, but they were small in number compared with what might have been brought together if it had been thought desirable. Manufacturers complained that not only were their trade marks copied in foreign countries, but their business was damaged through those imitations of trade marks being attached to articles of inferior quality. One remarkable case he would mention:—A manufacturer of needles sent his goods into the foreign market; a German manufacturer made a *fac-simile* of the English manufacturer's label, and sent his own inferior goods into the market so marked, thus damaging the Englishman's reputation. Complaints were naturally made as to the quality of the article, when the reply was:—"We have good German needles which we can sell at the same price;" consequently the trade of the English manufacturer was destroyed, and the foreign manufacturer by these means built up a business for himself. This showed that the trade mark of the English manufacturer was of little value unless it was protected in the foreign markets. He felt that the great remedy for the existing evils was a proper system of registration.

Mr. THOS. WEBSTER, Q.C., was sure they must all feel extremely indebted to Mr. Underdown for this most interesting paper. He entirely concurred with that gentleman as to the necessity for registration; and he was astonished that the Parliamentary Committee should have left that question undecided, because he looked to the registration of trade marks proper as the very foundation of the title to property in them. It was truly stated that this was a question of property. In the progress of civilization we came to recognise property in various things which were not so regarded at the time when the laws now in existence were framed; and in proportion as the objects of property were multiplied, so there must be advances made in the legislation for the protection of that property. Property was an empty name unless it was protected by the law; and if they recognized property in a thing that was not regarded as property before, they must not be surprised if the remedies which the old law gave were not applicable to the new property that had been created. Hence the difficulties which had arisen in the protection of copyright and things of that sort, which might be regarded as incorporeal hereditaments. Property in a trade mark was essentially a copyright, and he did not see any objection, except in point of form, to treating it as a copyright. If a man adopted a distinctive emblem, it was essentially a design, and might come within the definition of a picture in the copyright act. For all such things registration was essential, as being the evidence of title. It was the means by which the public could be informed as to the person who had first devised the emblem, and his claim of property in it. Property in a name was a different thing. A person might have respect for his name and character as a manufacturer, and he might have property in his name without registration. He thought in that particular a clear distinction was to be drawn. A man had no right to adopt another person's name; it was as much a fraud for other persons to use the name of the original producer in connection with a particular article as it was to adopt a trade mark which had been registered. There was a property in the name, and if another person adopted that name it was a fraud which should be dealt with by indictment, and not by action at law, because it was a fraud whereby the public were deceived. He thought there was another matter which was rather mixed up with this question, that was, misrepresentation with regard to

the quality of an article. It was said that a person's name or trade mark was a guarantee of quality. It might be so, and so long as the person remained as honest as he was at first, it was so. But the same man might make inferior articles. That was a distinct class of offence, the selling of goods not up to sample. They had thus three distinct things—property in a trade mark, property in a name, and warranty; and he thought the misrepresentation of articles, either as to quality or quantity, should be a criminal offence rather than the subject of a civil action. In the case of Farina and Silverlock, the excessive expense of those suits in equity had been shown, and this was most unfair upon the injured party. Reverting to the question of the registration of trade marks, it was required not only for the purpose of establishing the title, but a person who wished to design a trade mark of his own ought to have the opportunity of seeing what had been done before,—just as in the case of an invention he could examine the specifications of previous patents. The present law being inadequate, the great objects to be sought for were a proper record of the property in trade marks, and proper remedies in cases of infraction of the rights of that property.

Mr. COXON remarked that a name was often an inadequate protection. There might be two persons of the same name who sold the same kind of article. The reason why Messrs. Bass adopted a trade mark was from fear that there might be another Bass, and they wanted some distinctive symbol which would represent their own article beyond doubt, and which another man had no legal right to use. If another person's name was "Bass," he could not be prevented from calling his ale "Bass's Ale," but he could be prevented from using the pyramid as a trade mark. He was happy to find that there was no difference of opinion as to the necessity for registration; the only thing to be decided was the best way of carrying it out. His own feeling was that an effort should be made to induce the government to take up this question. He believed it would be a very difficult matter for an individual member of the House to carry through such a bill as Mr. Underdown had mentioned without the assistance of the ministry. He had been told by an old member of Parliament that the bill was too long by half to be carried by any single member, and that unless they could get the government to take it in hand, it must be very much curtailed.

Mr. WEBSTER explained that he did not say a name was sufficient, but if a person chose to use his name, and he thought it sufficient, there was no reason why he should be compelled to register it. If another person adopted the same name in connection with a similar article it was a fraud.

Mr. CAMPIN thought registration was the only way of giving a ready means of protecting trade marks. A resort to a criminal prosecution was by some thought necessary to give it efficiency; but care should be taken not to make the proceedings too cumbrous. The Act of 1862 gave a remedy by indictment, a proceeding which many persons would be disinclined to follow. For his own part he preferred the simple procedure provided by the Designs Act, which he thought would equally apply to the fraudulent use of registered trade marks.

Mr. GALLOWAY remarked, that the exhibition of fraudulent imitations of the labels of celebrated manufacturers which they had witnessed this evening, was sufficient to show that a radical change in the law on this subject was called for. He could conceive nothing more flagrantly wicked and disgraceful than such attempts to defraud the public and cheat the manufacturer. It was a direct felony upon manufacturers to issue such labels as those, and send them forth as genuine. Such a proceeding was a disgrace to our boasted character for commercial integrity. Desperate cases called for desperate remedies, but the great question was how these were to be applied. For his own part, he would visit the offenders in those cases with



condign punishment, and he would have the names of every man and firm who were guilty of such flagrant conduct published to the world, which he believed would have great effect in putting a stop to such disgraceful practices.

Mr. ROBERTSON BLAINE said, from the very admirable paper they had heard, and from the observations that had fallen from his friend Mr. Webster and other speakers, they must all be convinced of the great importance of something being done really to assist manufacturers and the public to put down this disgraceful state of things with regard to these imitations of trade-marks. He thought the last speaker had not too emphatically denounced so iniquitous a practice. It was a scandal upon the country. In reference to the legal remedies in such cases it was deplorable that a man should be put to the enormous expenses which the present state of the law required in protecting that which was his own property, viz., his trade-mark, for the courts of equity had long recognized the protection which trade-marks were entitled to. The subject had been taken up by the legislature, and proprietors of trade-marks had been largely assisted by the provisions of the Act of 1862. At that time the subject of registration was considered by a select committee, and, he thought, mainly, perhaps, in deference to the opinion of an esteemed member of the bar, Mr. Hindmarch, who spoke strongly against registration, it was thought advisable to defer it; the consequence was the Act of 1862 was passed without making registration a part of it. Now, in the year 1866, they found that the Act, as far as it went, worked very well. By that Act summary remedy was given before a magistrate in certain cases, but that was not always satisfactory. The great object of registration was really this:—It was known that in every case brought into a court, either of equity or law, they must bring their witnesses time after time to prove the right to the exclusive use of a trade-mark; and to obviate that great trouble and expense was the main object of registration. It was essential that the registrar should have the power to determine who was entitled to register, and what mark he might adopt. It should not be done in the loose manner now in use under the Copyright Act; but the registrar must see what he was about before he placed any name upon the register; and when, as under the Registration of Designs Act, he saw his way to register, he would give a certificate of registration, which in courts of law would be *prima facie* evidence of title. Moreover, with our enormous foreign trade, it was of the highest importance that not only should we have everything, as far as possible, right at home, but we should be able to obtain protection abroad, and this would be mainly assisted by the legislation now proposed; because, as had been said, the free town of Hamburg did not recognize our trade marks simply because there was no registration of them here. If we had a proper system of registration it would enable our Government to obtain reciprocal protection in other countries.

Mr. DUNDAS GARDINER said allusion having been made to him in the paper, he would briefly state his own experience with reference to foreign trade marks. Those who drank champagne, of course, wished to have that wine in as pure a state as they could get it. He would inform the meeting that, in the beginning of the year 1863, he was engaged in seventeen cases, in which M. Cliquot, and M. Moët, two of the greatest champagne growers, took proceedings against parties for selling spurious imitations of their wines with fraudulent trade-marks; the difficulty in those cases was to trace out the persons by whom the wine was sold, for it was generally taken out of bond in small quantities, and the holders were with difficulty discovered. In such a case as that, registration of trade-marks would give but slight protection, because the parties gave a sample of the genuine wine, while a spurious article was afterwards sent to the customer. He thought he could

understand how it was that the registration of trade-marks had been so long postponed. He believed it was owing to the fact that up to a recent period the law courts were divided in opinion as to whether or not there was any property in them. According to the decisions already given, it would appear that if, for instance, a person sold a particular quality of rum with the figure of an eagle as a trade-mark on the bottles, any other person was at liberty to use the same device for gin, and there were no means of restraining the sale of that gin as "eagle gin." The property was therefore not in the device, but in its application to a particular article, and he thought this might, to some extent, explain why the system of registration had not been adopted; but with the adoption of that system he believed a great many of the cases of fraud cited by the author of the paper would be quietly done away with. The great point then would be to make the registration as publicly known as possible, in order that people might be aware who were the owners of any particular device which had been adopted as a trade-mark.

Mr. HENRY MAUDSLAY, having expressed the interest with which he had listened to the paper, remarked that he feared there were many cases in which frauds were practised which would not be remedied by the introduction of the system of registration of trade marks. As, for instance, dishonest persons might become possessed of a large number of Farina's old bottles still having the genuine label upon them, and these might be refilled with a spurious article and sold to the public as genuine. The same observation applied to all mineral waters and other things of that kind. Coming to the question of the exclusive use of a name, he could say that though he might be supposed to have some respect for his own name, its use did not always protect him from fraud. It might happen that a piece of machinery was required to be sent out to Australia; it might be ordered through the agency of other persons, to whom it would be sent from the works, with the full name of the firm upon it, as a guarantee of the excellence of the material and workmanship. The agent might then remove the name of the manufacturers from the machine and put on a brass plate with his own name upon it in place of this. What remedy had he in such a case? What was the value of the "name" then?

Mr. UNDERDOWN said this was punishable under the Merchandise Marks Act.

Mr. HUNT said a case similar to that just mentioned occurred in the firm with which he was connected, in which a customer brought to them some goods bearing the label of the firm, and which had been purchased as being their manufacture. He at once perceived that the article was not their manufacture, and he afterwards found on the reverse side a label which was not that of his firm. By inquiries he was enabled to discover who the party was, and the matter was put into the hands of a solicitor. Although, under the Merchandise Marks Act, the person might have been proceeded against for a misdemeanor, the firm accepted a written apology from the offender, with liberty to publish it as they thought proper. He could confirm the remark of Mr. Underdown, that such a case as Mr. Maudslay had mentioned might be dealt with under the Act of 1862. With regard to the observations of Mr. Webster as to the punishment of manufacturers who had adopted a trade-mark, and afterwards sent out an article inferior to that on which this mark had been originally affixed, with the experience he had had in business, he could not conceive it possible that a manufacturer of reputation would thus lower the quality of his goods, an act which would result in complete loss of character.

Mr. DANIEL, Q.C., said reference having been made to his old client M. Farina, he would add that Mr. Underdown had not half done justice to the misery and anxiety which the English law inflicted on M. Farina in that case. The action was brought against the printer for the imitation of the label; having passed

safely through the Vice-Chancellor's Court, he had hoped to do the same before the Lord Chancellor, but the question was raised that an imitation was not a *fac-simile*, although it was so close an imitation that the difference could hardly be discovered without a microscope. The excuse was that M. Farina's label got rubbed off, and honest people wanted to replace an honest label, therefore a printer printed, not a *fac-simile*, but a colourable imitation, which it required the greatest skill to discover. Looking at the numerous imitations exhibited of Bass's labels, he almost wondered that the existence of such a man as Bass was not doubted. People had doubted whether such a man as Farina ever lived, and would have continued to do so, had he not appeared bodily in court on this occasion. The question seemed to him so plain and simple that the difficulty was to understand why the true remedy had not been found earlier—viz., registration. Nothing human was perfect, and there might be cases to which registration would not in every particular apply with certainty. Cunning and fraud might defeat the law in certain cases, but these were exceptional; in 99 out of every 100 he believed registration would be a sufficient remedy. With regard to the question of property in trade-marks, he thought his learned friend had hardly done justice to the Court of Chancery in reference to the question of property. Lord Cottenham, in the case mentioned, established as a principle of law that there was property in trade-marks, when he held that an individual who innocently and unknowingly adopted a mark which belonged to another man could not continue to use it. That principle had been followed up by Lord Westbury, when he held that if a man had a particular emblem by which he denoted the results of his own labour, the law protected him in the exclusive use of that emblem, and to that extent it became a property. His learned friend (Mr. Gardiner) had said, if he put the figure of an eagle as a mark upon rum, he could not prevent another person putting the same mark upon gin. So if a man took a stall at the opera with the right to use it on certain nights, it was his property during the time he had bargained for it, but at no other time. He believed the remedy was in a proper system of registration.

The CHAIRMAN said before asking the meeting to accord their thanks to Mr. Underdown for his very excellent paper, he would offer one or two observations upon it. In the consideration of this question they must keep in view the difference between the rights of the trader and the benefit of the public. He questioned whether the protection of trade marks would really do much to prevent fraud upon the public. It would prevent fraud in a particular way, but to suppose that the registration of trade marks would secure that none but pure medicines should be sold, or nothing but pure beer brewed, was a fallacy. What they wanted was a public registration of trade marks, and that for anyone using them who had no right to do so there should be a summary and certain punishment which could be inflicted with the least expense to the persons whose rights were invaded, and in such a public manner as should brand the offender with the character of a fraudulent trader. Moreover, the penalties should not be made so severe as to excite commiseration. As to the question of property in trade marks, it was impossible to conceive that any man who had achieved a reputation for a particular commodity, and marked it with his device, had no property in such a device. There was another point in connection with this subject which had not been touched upon, for it appeared to him that if this question of trade marks were properly settled, it would in a great measure assist in the settlement of the question of patent right. One of the great evils they had had to contend with in all the questions relating to the patent laws, was the enormous number of patents which had been taken out for trifling things, and which impeded the progress of true invention and improvement. If all minor matters could be taken out of the patent law and the property

in them secured by the mere registration of trade marks, this would relieve the question from a great incubus, and even if the patent law was abolished the property in trade marks would remain, and would stand to some extent in substitution for it. With these few observations he would now ask the meeting to thank Mr. Underdown for his very interesting paper, to thank him for bringing this subject again so lucidly before this meeting, and to express a hope that the committee now sitting would not rest till they had found either some member of the government or some independent member who will bring this subject before the legislature, and persevere in carrying the bill.

Mr. UNDERDOWNS, in acknowledging the compliment paid him, expressed the great pleasure which had been afforded him by the able manner in which this question had been discussed, especially at hearing from lawyers of such eminence who had taken part in the proceedings, that the property in trade marks and cognate subjects had finally been acknowledged and settled by the Court of Chancery and the House of Lords. All lawyers knew how that principle had been fought through every court—how gravely one decision after another had been given that there was no property in such things—and how the House of Lords had, in the case of the the Leather Cloth Company, decided that there was a distinct property in trade marks. If there was such a property established, the common law of England would come in to protect it. With regard to affording protection to the public, he thought this would be effected if the person who made goods could be induced in all cases, to put on them some mark which should identify him with the manufacture; that would be a protection as to the quality of the goods. As to the fraudulent adoption of names, he might instance the case of Messrs. Guinness, who had suffered much from the imitation of the *fac simile* of their signature on spurious stout. It had been difficult to establish this as a fraud, because it was not easy to prove that any one had been defrauded. It was not a forgery, the false pretence was almost impossible to prove, and he believed unless this could be proved no punishment could be applied. This would be rendered much more easy by a clause in the Bill. With regard to the difficulty of passing this bill through Parliament on account of its length, he would say that the Merchandise Marks Act, which was incorporated in this, contained twenty-four clauses, the Exhibition Medals Act two or three, and the whole bill contained only forty-three clauses, so that the additional provisions only required sixteen or seventeen clauses, which were not new in principle, and merely provided against the fraud referred to, gave the customs power of seizure, and set out the necessary formalities for registration.

Numerous specimens of fraudulent trade marks alluded to in the paper were shown, the genuine and spurious being exhibited side by side. There were upwards of thirty forgeries of Messrs. Bass's well-known labels, collected from most of the principal cities of Europe; a large number of similar imitations of the labels of Messrs. Tennent of Glasgow, forged in Havannah, New York, Trinidad, and elsewhere; of Messrs. Brook, Brothers, thread wrappers and labels, forged in Barmen, Augsburg, &c.; also, those of Messrs. Walker, Evans, & Co., of Derby; name-plates used by Messrs. Broadwood and Sons on their pianos, forged in London; also, forgeries of Messrs. Rowland's Macassar Oil wrappers, and of those for Messrs. Farina's Eau de Cologne; of Messrs. Everett's blacking labels; of those used on Messrs. Atkinson's perfumery; on Messrs. Harrison's mustard, and various other articles.

### Proceedings of Institutions.

HALEY-HILL WORKING MEN'S COLLEGE AND YOUNG WOMEN'S INSTITUTE.—The annual meeting and presentation of prizes to the students of these institutions took

place on Thursday evening, the 5th April, in All Souls' school-room. The principal, Col. Akroyd, M.P., presided. The attendance of students was very good. Mr. Gibb, the head master, read the annual report, from which it appeared that the Working Men's College maintained its prosperity and success as an institution, but the Young Women's Institute had been less successful. The Rev. Jonathan Jones, M.A., head master of the Guilsbrough Grammar School, was this year the examiner, and his report was also read, and upon the whole was satisfactory. Col. Akroyd then addressed the students, observing that their annual meeting seemed to be one of peculiar interest to Haley-hill. Occasionally they were favoured with the presence of visitors, sometimes the chief magistrate of the borough, yet, if this sort of stimulus were necessary, he should be afraid of the permanence of the institution. He had been anxious of late years that all the progress made by the institutions should be peculiarly the work of the students; that the impulse for advancement should come from within and not without; and indeed he was sure that unless the benefits of the college were ascertained and appreciated by the students themselves it would fail and cease to be supported. What was the conclusion to be drawn from the report? It was true that something was said about a falling-off in regard to the Young Women's Institute, but it must be remembered that there were other institutions of the kind in Halifax, and some of the members might have withdrawn to them. Again, it was difficult to understand how to adapt themselves to the various and varying tastes of young women of the present day. However, he was of opinion that there was no excuse for them to withdraw from that institution. With respect to the young men, upon whom would fall the battle of life, who would not only have to maintain themselves, but also wives and families—he looked to them as being the strength and support of the college; and he was delighted to find that with them there was no falling off, and that they kept up their attention and enthusiasm. He ascribed much of the success of the institution to Mr. Gibb, the head master. The prizes to the students were then presented by Col. Akroyd. Mr. Akroyd Ridgway next addressed the students, giving them some sound advice as to the prosecution of their studies. Thanks were voted to the examiner, the Rev. J. Jones, on the motion of the Rev. H. B. Hall, seconded by the Rev. Mr. Cox, head master of Heath Grammar School, and was carried unanimously. The Rev. F. Musson next proposed a vote of thanks to the chairman. Mr. F. Baines, George-street, seconded the motion, which was carried with acclamation. The chairman responded.

#### RAILWAY REFORM.

In Messrs. Travers' circular for March 24th this subject (see *Journal*, p. 345) is continued as follows:—

The public complaints against the present system of administration are, as we have seen, mainly these:—(1) That there are unreasonable discrepancies between the passenger rates of different lines. (2) That there are still more incomprehensible discrepancies between the goods rates of the same line; and (3) That there is a gigantic disproportion alike in the goods and the passenger traffic, between the price charged to the public and the expense incurred by the companies. The simple fact which the reader has to bear in mind is that he has to pay 8s. 4d. for being carried 100 miles, over which he can be conveyed at a cost of 3½d. To this we may add the equally undeniable but still more astonishing fact, that a ton of coals could be brought from the extreme north of England to Shoreditch for something like 1s.; and as the cost there is 7s. at the most, we might have it in hand here at 8s. What we actually do pay for it is between three and four times that sum. Before proceeding to explain the plan which has been proposed for the removal of these anomalies, it

may be as well to notice a most substantial grievance from which nearly every member of the shareholding portion of the community suffers more or less seriously—the ruinous cost of parliamentary proceedings. In old times the average cost of railways was £35,000 a mile; to-day it is only £12,000, or little more than a third; indeed, there is a line in Ireland which has been completed at the cost of £5,160 per mile. One consequence of this vastly increased facility of construction has been the rise of a new class of speculators, who have been justly called “the scourge of the railway interest.” In the palmy days when frantically sanguine people anticipated 20 per cent. dividends, railway companies only contended with each other. Now, two or three individuals form a company, and “run up an opposition line with or without assistance from others, as the case may be; and when the line is finished they sell it, lease it, or work it in opposition to an old line till they can get their own price; and having cleared a small fortune by the transaction, they are off to ‘fresh fields and pastures new’ in search of some other enterprise.” The tremendous contests entailed by these enterprising persons, as well as by established companies constantly struggling to extend their borders and “invade the territory,” as the very cool phrase goes, of their neighbours, are sufficiently notorious. Hundreds of thousands of pounds are consumed every year in fees to committees and fees to parliamentary counsel, while whole armies of solicitors, agents, surveyors, and witnesses are maintained as it were at free quarters by contending associations. The effect of the private bill system upon dividends may be conjectured even by those who are happy enough to be ignorant of it in their personal experience. One of the most feasible plans for mitigating this outrageous and most vexatious expenditure is to abolish the existing private bill system altogether, and to substitute for it the presentation to parliament of a report upon railway bills, and all other public projects, by a council of paid examiners. Members of the legislature, unpaid and overwhelmed with other public and private business, cannot be expected to devote the laborious and sustained attention which is required for the investigation of the thousand schemes which now every spring seek parliamentary sanction. Before a paid, and so to speak, judicial council, no company hostile to the proposed project should be allowed to appear. The only opposition permissible would be that of the inhabitants of the district, who might appear by counsel or otherwise. If they could show that the project would, if carried out, actually inflict some injury on them, or in any way prove prejudicial to them, or contrary to the national interest, then plainly the report ought to be unfavourable. But except in this case it is hard to see why the requisite permission should be refused. The practice of such refusals, in order to protect an established company in its monopoly, is altogether out of harmony with the spirit of free enterprise which is encouraged in every other department of the national affairs. The unfettered movement of capital is the great principle of all legislation of this kind. It may be said that as railway projectors always want certain compulsory powers, they are not fairly to be compared with other enterprises. But if these compulsory powers were granted without just cause, it would be open, as we have said, to the inhabitants of the district or any one of them, to make out a case against the granting of such powers, either in gross or in some special item.

It may be said, again, by those who mistake ignorant or interested rumours for fact, that the original companies received a sort of understood moral guarantee that they should not be interfered with in their own districts. The truth is just the reverse. “Each company, in obtaining its Act, had it granted on the clear understanding that the legislature could and would permit whatever competing lines in the same district they might think necessary.” It will be seen presently that there

can be no alternative ultimately between this unlimited competition and the scheme to which attention is now directed.

Let us hasten to explain, as briefly and clearly as may be, the precise nature and the true meaning of that plan, at first so startling, which is vaguely called the plan for the Government purchase of all the railways of the country. We shall reserve a consideration of its expediency for a third and final article. The most important thing, in the first place, is to get a thoroughly distinct notion of what the proposal really is, and of the benefits which its advocates promise that the public shall reap from its adoption. Persons ignorant of the subject, yet who have not on that account refrained from sneering at the proposal as the most preposterous that ever was broached, are disposed to think it a new-fangled novelty, sprung from the brain of a crotchety dreamer. Let us remember that the conduct of the railway up to 1844, had been so monstrously bad that this plan was seriously brought before the legislature at that time, and that both Sir Robert Peel and Mr. Gladstone, then President of the Board of Trade, thought the plan in itself worthy of approval; but were in some doubt, or at least the former of these two distinguished statesmen was, as to the expediency of carrying it out before public opinion was fully ripe. The doctrine which startles so many people now was recognised distinctly in the Railway Act of 1844, and especially in the permissive clause, making Government purchase optional at the end of 21 years—an interval which is just now coming to a close. The proposal therefore can neither claim the merit, nor is guilty of the demerit, of being novel.

1st. What is meant by Government purchase? Not a payment of money by the Government to the railway proprietors, for as the value of railway stock is rather more than four hundred millions, this would plainly be impossible. Purchase from the shareholders "means the exchange of their shares for a certain amount of Government stock, the shareholders giving up their property, from which they receive a fluctuating dividend, and receiving in exchange a fixed annuity for a lesser amount *in perpetuity*." As the State is the best security, a given rate of interest from the State, being much more certain, represents a larger capital than the same rate from any ordinary investment. The income of stock is not the sole test of its value. "All shareholders," says Mr. Galt very justly, "would willingly accept a much lower rate than they now receive if it was secured by a Government guarantee, not merely by reason of the certainty of always getting that interest, but from the still more important considerations of the *security of capital*, and the higher price the stock would realize when sold." The question for the shareholders would be this:—What effect will the Government purchase have on the market price of my shares? or, how much more than the present price could I obtain by selling to the Government? Putting this in another way, what bonus would the Government give to induce them to sell? Let us take an example. In June, 1864, London and North Western Shares were quoted at 114. Suppose the Government offered a bonus of 15 per cent. on the price of this particular day; this would raise the price to £131. "Is there any shareholder in the London and North Western who would refuse £131 per share from a private individual, on the sole condition that he should not purchase back into the same company?" In the Act of 1844 there were two different modes of procedure. This was one. The other was to pay "a sum equal to twenty-five years' purchase of the annual divisible profits, estimated on an average of the three then next preceding years." This mode, however, of ascertaining the value of a railway would be open to a number of very fatal objections, the most obvious of which is that the dividend produced over a short period is no test of value. Again, a railway whose dividend had gone on increasing by 1 per cent. for each of the

three years, would have its value estimated on a retrospective decrease, instead of on a prospective increase. And there are other arguments in the same direction not less conclusive.

2nd. How will the Government pay the bonus; or rather, how will the Government be able to procure the interest on the bonus? The average difference of interest between an investment in Government stock and one in railway stock may be put at £1 10s. per cent. In other words Government would make £1 10s. per cent. more by the railways than the rate of interest which it had to pay upon them. Rightly speaking its superior credit would enable it to borrow at 3 per cent. money out of which it could make 4½. The bonus would on the average be so fixed that one-half of this difference, 15s. namely, would pay the interest on the bonus, while the remaining 15s. would make up for the loss in reduced fares and charges; that is to say, "of the increase in the value of income derived from the conversion of railway shares into Government stock," the profit would be equally divided between the two parties; the shareholders and the public. Of course, the principle of the movement is that the State is to derive no revenue from the working of the railways. The means of communication and conveyance are supposed to be of such immense national importance, of such momentous concern to those of us who travel, to those of us who send and receive merchandise, and therefore, to all those also who are affected by the cost of transit of goods, that is to all consumers, that it must be inexpedient to make it an object of taxation. At present we pay upwards of thirty-one million pounds to the railway companies. It has been estimated that one immediate effect of the transfer of the railways from a number of profit-seeking associations to the nation, which of course would seek no profit out of its own pocket, would be to reduce the fares by two-thirds, that is, to relieve all travellers and all consumers of goods, in other words, the whole community, of what is to all intents and purposes a tax of no less than twenty odd millions of pounds.

3rd. What advantages would national ownership possess which would enable the Government thus to cheapen fares and freightage?

- (a.) It would want to make no profit.
- (b.) There would be no ruinous contests between rival companies.
- (c.) At present, the railways of the United Kingdom are managed by some seventy or eighty independent companies. An immense sum, certainly not less than a couple of millions per annum, would be saved by amalgamation into a single system, because the management would be consolidated, and therefore cheapened.

4th. How would the Government actually set to work to effect this great change? "The terms for the different classes of shares having been settled by the legislature," says the writer to whom we have already referred, "and the day named for which the Stock Exchange quotations from the share list should be taken as the standard of prices, it would be announced by Government that on and after such a day all companies that chose to accept the Government terms would be dealt with. The legislature in the meantime having settled the tariff, both for passengers and goods, the Government would only require to make a temporary arrangement with the board of such company for carrying on the traffic until the bill of the companies came in. So soon as one of the great lines toward the north should signify its adhesion to the Government, and commence business on the Government tariff, it would encourage all the other companies having lines in the same direction to accept the Government terms, and thus the extension of the scheme throughout the kingdom would soon be accomplished."

5th. Does State ownership necessarily imply Governmental administration? No, for the management of

the railways might be conducted in one of three ways at least, none of them involving the objectionable characteristics of actual Government management. (1.) The country might be divided into convenient districts, a tariff having been settled by the legislature, and the working of the lines might be left to companies on the competitive principle, deriving their revenues "either from a certain percentage on the gross receipts, or a fixed sum per train per mile, as might be agreed on. This system, in fact, would resemble the familiar practice in the case of Turnpike Trusts. (2.) The tariff having been settled, the administration might be left to a Board of Commissioners, selected by the directors themselves, from their own directorates, and simply carrying out the laws enacted for their guidance, as is the case in the administration of the Customs and Excise departments. (3.) There might be a board similarly appointed and presided over by a Minister of the Crown, "who would be responsible to the legislature for the performance of his duty, that duty to consist in fully developing the traffic of the country, by adopting the best means advised by those who were most competent to do so," there being in the Board representatives acquainted with the requirements and resources of each respective district.

The objections to these schemes we shall consider in a final article, as well as the question of some middle course, which might secure the public some at least of the advantages we are promised from this more extreme and revolutionary measure. Meanwhile, it may be well to remind shareholders of what we said at the commencement. The principle of the Act of 1844 was declared by Sir Robert Peel to be a declaration to the companies, "You shall not have a permanent monopoly against the public." Hostility to monopoly has grown stronger every day since. Is it to the interest of the proprietors to allow unlimited competition (and this is what it must come to), to go on depreciating the value of their property? There are two courses open—sale to the Government, and such a reduction of tariff as will render competition futile.

## Fine Arts.

INDUSTRIAL ART IN PARIS.—The *Union Centrale*, of which mention has frequently been made in this journal, and the object of which is to do for France what the South Kensington Museum is doing so well here, is pursuing its course with great spirit. The lecture session commenced on the 9th of the present month of April, and lectures will be given three times a week during the session. It will give an idea of the ability called in aid of the society's efforts to mention that during the current month MM. Bauderon, Caffé, Rousseau, de Longpérier, and Guillaume, all members of the Institute of France, will address the young working men of Paris on architecture, sculpture, and painting; on sanitary questions connected with the artistic professions, on chemistry in relation to the industrial arts; on the teaching of drawing; and other subjects connected with art education. The library of the *Union Centrale* is growing rapidly in importance, and is open every evening from seven to ten o'clock.

EXHIBITION OF FRENCH HISTORICAL PORTRAITS.—It is proposed to hold an exhibition of portraits in Paris next year, during the time of the Great Industrial and Art Exhibition, in the Champ de Mars. "A large building is to be erected for the purpose," says the *Moniteur des Arts*, "in the avenue of the Champs Elysées." It is said that the proposal emanates from those who are in a position to carry out the object in the best manner, not only as regards art, but in a material point of view.

BORDEAUX ART EXHIBITION.—This exhibition, one of the most important in the French provinces, opened in the last week in March. The number of pictures exceeds six hundred and thirty, and in the list of exhibiting ar-

tists are many well-known names:—Accard, Antigua, Fichel, Hébert, Jongkind, Landelle, Lays, Meissonier, Philippe Rousseau, Theodore Rousseau, and many others. Such exhibitions as these, taking place in all the principal towns of the empire, must have an immense effect, not only on the artistic education of the people, but also directly on art.

## Manufactures.

COATING CAST IRON WITH COPPER.—There has hitherto been a difficulty in accomplishing this. M. Oudry, about two years since, adopted a process which enabled him to give a conducting surface to iron, so as to permit of copper being deposited by means of the electrolyte; and this he effected by giving the iron several coats of a special paint, which was subsequently covered with plumbago. This, however, gave no direct adhesion of the coating to the iron. M. F. Weil has just invented a process, by which the layer of copper is deposited directly on the cast iron; it is stated to be very adhesive, and may be increased to any thickness by means of the electrolyte process. He dissolves in a stoneware vessel,\* in four litres of water, 750 grammes of the salt known as Rochelle salt, and 400 grammes of caustic soda of commerce. He next dissolves 175 grammes of sulphate of copper in one litre of water. This solution is then poured into the first, producing a blue liquid, forming an alkaline copper bath, marking 19° Baumé, at a temperature of 20°. The iron to be operated upon must first be well cleaned by being immersed in a pickle composed of dilute sulphuric acid, of the strength of 2° Baumé.† At the end of ten minutes the articles are taken out and plunged in a feebly alkaline solution of caustic soda (1° Baumé). The next day the articles are withdrawn from the solution, and well scrubbed with an iron "scratch brush." They are then surrounded with zinc wire, and by means of it suspended in the alkaline copper solution described above. At the end of from about twenty four to forty eight hours—sometimes as much as sixty hours—the coppering will be found to have been completed. The articles are thoroughly washed in plain water, and will bear a hard polishing with a "scratch brush" of brass, without any particle of the deposit detaching itself.

BREECH-LOADING FIRE-ARMS IN RUSSIA.—The Russian Government have quite decided that the breech-loading system shall be adopted for small arms throughout the service. There are three government manufactories in Russia, producing in the aggregate 1000 rifles per week. The quality of the arms made is, in all respects, of the highest class. One kind of breech-loading rifles, made at the government factory near St. Petersburg, is that most in favour at the present time with the Russian Government, but they have not yet sufficient confidence to adopt it finally; further trials of other systems will be made before a decision is arrived at. The opening of a breech in this arm is effected in much the same way as in the Prussian needle-gun. It is fired with a cap. The escape of gas is prevented by a bullet placed at the back of the charge, which, under the force of the explosion, tightly fills up the back of the breech. After firing, the bullet is thrust forward by the succeeding cartridge, with some little assistance from an arrangement designed to effect the first movement of the bullet, and it then becomes the projectile. Good revolvers (pistols) are also made at the government establishment at Tula.

\* Vessels of wood, covered with gutta percha, are equally available.

† The careful "pickling" of the iron is very important for the success of the operation; and the pickling bath found most effective is one composed of 8 or 10 per cent. of sulphuric acid; the articles should be left in for half-an-hour before being washed, and afterwards plunged in the alkaline copper solution.

**GAS OF LONDON.**—Dr. Letheby, the medical officer of health and gas analyst for the City of London, in his report, just issued, points out that before the Metropolitan Gas Act of 1860, when the price of the Great Central gas was but 4s. per 1,000 cubic feet, the average illuminating power of the gas, as estimated by the new burner, was 14·79 standard sperm candles; whereas since the passing of the Act, when the price has been 4s. 6d. per 1,000 cubic feet, the average illuminating power of the gas been but 13·63 candles. Of the 870 examinations of the gas of each of the companies during the year, the gas of the City Company has on 31 occasions been below the standard of the Act, that of the Chartered Company on 14 occasions, and the Great Central on 4. The chemical quality of the gas has, in one particular, been rarely equal to the requirements of the Act of Parliament. He alludes to the excessively large amount of sulphur which has been almost always present in the gas supplied to the City; and states that the proportions of sulphur in the gas have been larger and larger with every succeeding quarter of the year. The amount of sulphur in the gas of the City Company has ranged from 14·2 grains per 100 cubic feet to 28·2—the average being 19·6 grains; in the Chartered gas it has ranged from 13 grains to 30·7—the average being 21·2; and in the Great Central it has fluctuated from 14·4 grains to 32·9—the average being 24·1. He also states that of the 220 experiments made on each of the companies' gas during the year, there were 87 occasions with the City Company, 126 with the Chartered, and 212 with the Great Central, when the proportions of sulphur were excessive, making a total of 425 out of 664 occasions when the requirements of the Act of Parliament were not fulfilled. Such amounts of sulphur were not found in the gas of the City companies before the passing of the Metropolitan Gas Act of 1860. The following were the proportions obtained with the same instruments from 1853 to 1859.

Amount of Sulphur per 100 cubic feet of Gas.	
Great Central Company .....	16·4 grains
Chartered Company .....	21·5 "
Commercial Company .....	17·1 "
Average.....	18·3 "

In the gas of twenty-four of the towns of England he has ascertained that the proportions of sulphur rarely reach to 20 grains in the 100 cubic feet; in nineteen instances it was below 15 grains, and in seven instances below 10 grains. The two causes which are chiefly concerned in the excess of sulphur in the gas supplied to the City, are—(1.) The presence of pyrites in undue quantity in the coal; and (2.) The imperfect purification of the gas. While the gas of the City Company was so free from sulphur, the greatest care was taken to remove the pyrites from the coal; and in proof of the imperfect purification of the gas, he states that he has had no difficulty in removing much of the sulphur from the so-called purified gas supplied to the public. This is not merely a laboratory result, for it has been tried on a very large scale at the gas works at Nottingham, by Mr. Hawksley. In reviewing, therefore, the whole of these facts, Dr. Letheby concludes that the main cause which has operated in lowering the chemical quality and illuminating power of the gas of this metropolis, is the substitution of oxide of iron for hydrate of lime as a purifying agent; for not only does the former substance fail to remove the more complex sulphur compounds from the gas, but it also fails to absorb carbonic acid; and thus the gas is both chemically impure and of lowered illuminating power. In former times, when hydrate of lime was the purifying agent, and so also where it is still used in the towns of England, the purity and illuminating power of the gas, from the same coals, are higher than they are in London.

## Commerce.

**THE OPIUM TRADE IN CHINA.**—The opening of the ports on the Yang-tze, and of Ché-foo, Tientsin, and New-chang, in the north of China, has created a great change in the opium trade of Shanghai. Formerly the supplies of this drug necessary for the requirements of all North China were purchased at this port by the native dealers, and by them distributed to the consuming districts. The new ports now receive their supplies through foreigners, and Shanghai has become more a depot for receiving and transshipping opium than a market for extensive sales. A few of the old wealthy native merchants still make considerable purchases for shipment to the northern coast and there is a large local consumption to be supplied, but still sales on the spot are much reduced from former times. Malwa and Patna are the two descriptions of drug imported. Benares, on account of its cheap price, has of late been coming into consumption, and in time will, doubtless, be more generally used. A few years ago Patna was only taken in very small quantity, but now it occupies a most important position in the imports to China; and the statistics of the trade show how steadily the demand for it has grown. Its much lower cost, as compared with Malwa, has brought it chiefly into consumption in the province of Shanghai. The northern and Yang-tze ports are supplied with Malwa. When the river was first opened, the ports of Kin-Kiang and Hankow took off very little opium indeed, and it was thought the native drug was too cheap to admit of India opium being imported; but of late years Malwa has been steadily coming into favour, and the trade is now important. The deliveries in 1863 were 31,568 chests; in 1864 29,721 chests; last year they again increased. The export of opium into the province of Canton is said to be 1800 piculs a month (240,000 lbs.), of which about 700 find their way to the city; the largest part of the importation is smuggled. In 1862 about 4,000 piculs passed the custom house; and for the first four months of 1863, the receipts increased to more than 600 piculs a month. In May of that year a government war tax of 16 taels a picul was imposed. The levying of this tax no doubt increased smuggling, for the amount passed by the custom house dropped at once to from 175 to 200 piculs per month, at which rate it has remained ever since. The quantity which passed the customs at Canton was, in 1860, 2,340 piculs; 1861, 1,361; 1862, 3,912; 1863, 3,809; 1864, 2,490; one-half being Malwa, the other half Patna. The import at Ningpo was 2,763 chests in 1863, and 3,307 chests in 1864; of which 2,410 chests were Malwa. Attempts have been made to introduce Persian opium into consumption, but without success. At the port of Che-foo the consumption is about 100 chests per month. At Kin-kiang 2,100 chests annually.

**CHINESE WOOL.**—The export of sheep's wool from Tien-tsin has steadily decreased within the last four years, the quantity exported in 1864 (370 piculs of 133 lbs.), being only a little over one-fourth of that exported in the previous year. That of camel's wool or hair has, on the other hand, increased each year since 1861. In 1864 the shipments were 428 piculs. The tariff duty on this article was lowered by the Chinese, at the close of last season, and fixed at 5 per cent. *ad valorem*, a charge which will probably give a considerable impetus to the export of this product during the present year. Camel's wool comes principally from Mongolia, and foreign merchants must send their agents there to purchase it, the trade not having yet reached that stage in which the article would be brought down by the Mongolians themselves to Tien-tsin for sale.

**THE AMERICAN COTTON SUPPLY.**—We (*United States Economist*) are enabled to present to our readers the result of a very careful estimate of the total supply of cotton in the United States on Feb. 1, 1866. The statistics have



been compiled from a survey of the stocks at the several points, under the auspices of a number of manufacturers and merchants, and are, we understand, endorsed by the Secretary of the Treasury, as approximating official estimates based upon the reports of Treasury agents. The following is the estimate of cotton in the United States on February 1, 1866 :—

Cotton in New York city .....	Bales. 327,000
Cotton in other cities, viz., Boston, Providence, Philadelphia, Baltimore, Wilmington, Charleston, Mobile, New Orleans, Florida, and other Texas ports, St. Louis and other Mississippi river ports .....	600,000
Estimated to come forward from the interior (the estimates are made by commission merchants and others who have agents throughout the South where there is a probability of cotton being for sale) .....	550,000

Total number of bales ..... 1,477,000

The amount gone into consumption and exported during the nine months from May 1, 1865, to February 1, 1866, is thus shown :—

Supply in the United States, May 1, 1865 ....	Bales. 2,255,000
"                    "                    Feb. 1, 1866 ....	1,477,000

Consumed and exported in nine months 778,000

Of a total supply of 2,225,000 bales on May 1, 1865, we have, up to February 1, 1866, shipped and taken into consumption at home 778,000 bales, and have 1,477,000 bales for supplying foreign and domestic spinners until the new crop comes to market. The home consumption and export combined, averaged for the nine months ending 1st February, 87,555 bales per month; the stock on hand, after deducting 500,000 bales for stock at the ports, will yield from February 1st to September 1st an average monthly supply of 139,571 bales, or 60 per cent. more than the average during the former period. At the same time New England is largely supplied with cotton. The stock held at the mills of that section is estimated at 185,000 bales, which, upon an average weekly consumption of 12,000 bales is equal to a four months' supply. Such are the facts connected with the supply of cotton, as nearly as it is possible to estimate. They show that our manufacturers, as well as those of England, have been acting under a grave hallucination as to the stock of cotton, and consequently as to its value. It would be very unsafe to assume that already the price has fallen to the level demanded by the discovery of the actual supply. With a certain supply of 2,500,000 bales from the next crop, and possibly even a much larger amount, it is impossible that current prices for raw cotton can be much longer maintained.

### Colonies.

NEWFOUNDLAND.—The area of Newfoundland is estimated at about 25,000,000 acres; about 230,000 are in possession and 60,000 under cultivation. Nearly all the farming is done within a mile or two of the sea coast. The crops consist chiefly of hay, potatoes, and turnips, but oats, barley, and wheat are successfully cultivated. The great source of wealth in Newfoundland is its fisheries. For a quarter of a century it has usually 100,000 quintals of dried cod-fish per annum, the value ranging from about 250,000 dols. to 5,000,000 — this does not include the exports from Labrador; and there is besides a quantity of other fish oil and skins imported from Newfoundland. The exports as reported at the custom-house have for a series of years exceeded the imports. In 1862 the exports amounted to £1,171,723, and the imports to £1,007,082. Spain, Portugal, Italy, and the West Indies take a large proportion of the fish.

On the other hand, Newfoundland buys a great deal from the United Kingdom, and pays chiefly in money. The imports from the United Kingdom in 1862 amounted to £353,813, and the exports to £327,019. The list of imports into Newfoundland comprises large quantities of provisions, every article of which can be supplied from Canada, and when Newfoundland has joined Ottawa, and a closer connection has been established between the two colonies, and postal communication has been provided, it is inevitable that Newfoundland must draw a very large proportion of its supplies from Canada. In 1862 the exports from Canada to Newfoundland amounted to little more than £50,000.

COTTON IN QUEENSLAND.—Cotton has fallen into some disrepute, in consequence of the losses sustained by the various companies engaged in its growth, but the yield of the crop grown in 1865 was such as to induce the owners of almost all the farms on which it was grown to plant a greater breadth of land in the latter part of the year. Recent accounts state that from the appearance of the crop then growing the yield of the present crop, should the gathering season prove reasonably dry, will be much larger than in any previous year. It is not on large estates but with small farmers, where the members of a family can be profitably employed in picking cotton, that the success of this industry is to be looked for.

MELBOURNE EXHIBITION.—At a meeting of the Intercolonial Exhibition Commissioners, on the 22nd January, on the subject of providing necessary accommodation for the forthcoming Intercolonial Exhibition, it was resolved that a permanent building be erected on the site of the Exhibition Reserve, at an estimated cost of £10,000, including the cost of enclosing the ground.

SOUTH AUSTRALIA.—The following table shows the population of the colony from its foundation in 1836 to the present time. The first census was taken on February 26, 1844; subsequently, every five years. It also shows the value of the exports each year, and the average of such exports per head of the population :—

Years.	Population.	Exports.	Avg. per head.
1840	14,610	15,650	£1 1 5
1845	21,759	131,800	6 1 2
1850	63,700	545,039	8 11 2
1855	96,982	686,953	7 1 8
1860	121,960	1,576,326	12 18 6
1865	156,704	2,754,657	17 11 7

The exports of produce, up to 1840, consisted of wool, whalebone, and oil, but since then they have become more general, and may be classed as under :—

Exports.	1864.	1865.
Agricultural .....	£1,480,745	£1,233,469
Horticultural .....	10,808	10,021
Dairy .....	11,147	8,114
Animal .....	794,502	844,335
Minerals .....	691,624	620,212
Manufactures .....	18,888	21,442
Natural productions..	7,541	15,967
Unenumerated .....	282	1,097
	£3,015,537	£2,754,657

The total value of the imports during 1865 was £2,927,596, being an increase over those of 1864 by £514,665. The sales of Crown lands during 1865 amounted to 317,298 acres, realising £519,025. The average price in 1860 was £1 12s., which is higher than any year except 1854, when £1 15s. was the average. The estimated area of the province of South Australia is 245,172,837 acres; the quantity sold to the end of 1864 is given as 2,894,585 acres. By adding the sales of 1865, it will appear that the total quantity of land sold to the end of last year was 3,211,833 acres, leaving an area of 241,960,954 acres unsold. This quantity



exceeds the entire area of the United Kingdom by 163,528,363 acres.

### Obituary.

MR. CHARLES WYE WILLIAMS died on Monday, April 2, aged eighty-seven. When a young man he practised as a barrister-at-law on the northern circuit, but he speedily abandoned this profession. At the beginning of the present century, Mr. Williams was the acting partner in large bleach works in the north of Ireland, and he there had occasion to make himself familiar with the principles and the practical application of chemistry. He listened to the first enunciation of the atomic theory by William Higgins, and attended the first lectures which Davy gave in Dublin, as well as those also of the late Dr. Andrew Ure, between whom and Mr. Williams a strong friendship sprung up, to end only with the death of the former. When Mr. Williams's book on the combustion of coal was first put to press, in 1839, Dr. Ure corrected every proof-sheet with his own hands. In 1806-7 Mr. Williams erected a large linen mill in Ireland, and introduced into it, for the first time in that country, iron spur gearing, cast by Edwards, of Belfast. In 1822 Mr. Williams went to the cost of patenting and introducing the feathering wheel, invented by his friend, Mr. Oldham, and known as the Oldham wheel, and which, under some modifications, at last became known as the Morgan wheel. In the next year the present City of Dublin Steam Packet Company was formed, under the style of Charles Wye Williams and Co. Six steamers were progressively built, and the present style of the company was at last acquired under the provisions of a charter granted in 1828, Mr. Williams continuing, until within the last few years, to be the managing director. The company's Act was obtained more especially to enable them to place steam vessels upon the river Shannon, upon which half-a-million of money was some time after expended in improving its navigation. The company obtained further Acts, one so late as 1860, to enable them to raise the capital to construct the four magnificent steam vessels which now maintain the service between Holyhead and Kingstown, and in the construction of which Mr. Williams, at the ripe age of eighty, took a warm interest, journeying up to London to witness the casting of the cylinders of the *Leinster*, at Messrs. Ravenhill, Salkeld, and Co.'s. Very shortly after the City of Dublin Steam Packet Company was formed, Mr. Williams and his co-manager, the late Mr. Francis Carleton, undertook the formation of a Transatlantic steam service, and they built the *Royal William* and bought the *Great Liverpool*, both of which vessels made several voyages to New York shortly after the first trips of the *Sirius* and *Great Western*. The Atlantic Company did not succeed, however, and Mr. Carleton and the directors of the then Peninsular Steam Company formed the present Peninsular and Oriental Steam Navigation Company, which took over the steamship *Great Liverpool* for their Indian service. Mr. Williams, at a very early date, applied water-tight bulkheads to divide a ship into separate compartments; and this improvement formed the subject of a paper which he presented to the British Association in 1837. The first edition of Mr. Williams's treatise on the combustion of coal was printed in 1839, the City of Dublin Steam Packet Company, by the desire of the directors, assuming the whole cost of publication. In the course of an experience in the building and equipping of ships, he had perceived that, "notwithstanding the improved state to which the construction and appointments of the hull and general machinery of steam-vessels had arrived, great uncertainty and risk of failure still prevailed in the use of fuel and the generation of steam." He found that the cause of this uncertainty and risk of failure lay "in the absence of any well-found principle in the construction of the boiler," and "that the part on which most depended

appeared least understood and least attended to, namely, the furnace," which "was too often left to the skill (or want of it) of working boiler-makers or bricklayers." In his laboratory he sought for the remedy by practical experiments, and succeeded in inventing a model boiler and furnace, with which he entered the lists in the great competition of makers of marine steam-boilers at Newcastle for the £500 prize. The professional umpires on that occasion were Sir William Armstrong, Dr. Richardson, and Mr. Longridge, who decided in favour of Mr. Williams's system, which they pronounced to be "applicable to all descriptions of marine boilers," while "its extreme simplicity is a strong point in its favour." Mr. Williams presented the £500 to a popular institution. For an essay on "The Prevention of the Smoke Nuisance," Mr. Williams received, in 1856, the Society of Arts' £25 Gold Medal, the value of the prize being enhanced by its presentation by the late Prince Consort. Mr. Williams published an able paper "On the Construction of Marine Steam Boilers," which he read at the Institution of Naval Architects; a pamphlet on "The Steam-generating Power of Marine and Locomotive Boilers;" and in 1860 appeared Mr. Williams's last work, the results of experiments upon which he was still engaged when in his eighty-first year. This was upon "Heat and Steam." It advanced the curious view that water, as water, could have no other temperature than 32°, and that any greater apparent warmth was due to the presence of steam diffused among it. Mr. Williams was an associate of the Institute of Naval Architects and of the Institution of Civil Engineers, and a member of the Society of Arts, having been elected in 1854. The remains of the lamented gentleman were interred at St. James's Cemetery, Liverpool. The pallbearers were Messrs. J. C. Ewart (late M.P. for Liverpool), W. Watson, P. Howell, J. J. Hance, J. K. Rounthwaite, and E. J. Reed (chief constructor of the navy). Upwards of one hundred of the *employés* of the City of Dublin Company followed the remains to the grave.

### Publications Issued.

A DICTIONARY OF CHEMISTRY, by Henry Watts, B.A., F.C.S., assisted by numerous contributors. (*Longmans.*) Part XXXIII. of this work is just issued, and deals with articles from "Phosphorus" to "Potassium."

THE POPULAR SCIENCE REVIEW. Edited by Henry Lawson, M.D. (*Robert Hardwicke.*) The last number of this work, which is published quarterly, has just made its appearance, and contains articles on the "Volvox globator," entozoon-like bodies in the muscles of animals destroyed by the cattle plague; our house-spiders; raised beaches and their origin; milk and its adulteration; the amaba, its structure, development, and habits; the sofataro and fumaroles in the neighbourhood of Naples; and the graphotype. To these are added reviews of scientific works, and a scientific summary.

### Notes.

TRAINS AT LONDON-BRIDGE STATION. — The *Railway News* says that on Easter Monday last year 850 trains, engines, &c., passed under the A.B. signal-box during the 18 working hours, from six o'clock to twelve midnight. This was at the rate of a train at about an average of every minute and a quarter for the 18 hours. The trains conveyed 250,000 persons, all without a single casualty. On Easter Monday last, which was earlier in the season than the year before, 915 trains were signalled out and in at London-bridge station, and of these above 700 trains were signalled at the A. B. station. The total number of passengers, out and in, at London-bridge was about 200,000, of whom about 45,000 were carried to and from Greenwich.

**PRECAUTIONS AGAINST THE CATTLE DISEASE.**—It is said that phenic acid was the principal substance used in the Jardin d'Acclimatation in the Bois de Boulogne to prevent the spread of the disease amongst the animals in that establishment. More than twenty pounds of this acid were used daily in washing the walls and mangers and in sprinkling the floors of the stables and enclosures, and it is to its constant use that the arresting of the malady is generally attributed. Doctor Déclat, of Paris, has recently published a work on phenic acid as a disinfectant. The doctor adopts the theory that cholera and other diseases are caused by the presence of animalculæ in the blood, just as liquids are thrown into a state of fermentation and decomposition, and that phenic acid, used either in the shape of solution for sprinkling apartments, stables, and other places, or worn about the person in the form of an impregnated bag, but especially in the former way, is a most valuable means of prevention. "Phenic acid, the alkaline phenates, and coal tar, are," says the doctor, "the best preservatives known against the development of these animalculæ, and, consequently, against contagion;" and, he adds, "they have not the inconvenience of chlorine, the vapours of which cannot be inhaled with impunity." For sprinkling purposes it is recommended to dissolve the phenic acid in five times its weight of alcohol, and then dilute with water. A more economic form is that of coal tar, with which it is recommended to treat the walls, woodwork, and even the floors of places in which animals are kept, and also the horns and hoofs of the animals themselves. Another recommendation is to let the animals drink water in which coal has been mixed for a certain time; it is said that pigs, when ill, seek for coal and devour it with avidity, especially when mixed with their ordinary food. The sanitary value of phenic acid and its compounds is well known in England, but every new piece of evidence is worth recording.

**AGRICULTURAL COMMISSION IN FRANCE.**—The Imperial Government has just organised the commission whose duty it will be to inquire into the condition of agriculture, and to inquire into the causes of the serious complaints made by the friends of the agriculturists in the Corps Legislatif. A central commission is appointed to sit in Paris, and preside over the whole inquiry. The commission will be presided over by the Minister of Agriculture, or, in his absence, by one of his colleagues; and M. Monny de Mornay, the Director of Agriculture in the first-named ministry is appointed commissaire-general of the inquiry. Amongst the other members of the commission are M. Chevreul, president, and other members of the Agricultural Society of France; MM. Combes, Chevalier, Boussingault, Dumas, members of the Institute of France. The commission will appoint its own members or other persons to act with the Prefect as local commissioners, and, in order to systematize the action of the whole, the departments are arranged in six groups, according to their agricultural character. There is no doubt that the inquiry will elicit facts that may be advantageously used elsewhere as well as in France.

#### MEETINGS FOR THE ENSUING WEEK.

- MON.....** British Architects, 8.  
Society of Engineers, 7.  
Medical, 8. 1. Clinical Discussion. 2. Dr. Broadbent, "On Chorea."  
Royal Inst., 3. Prof. Du Bois Reymond, "On Muscular Contraction."
- TUES...** Civil Engineers, 8. 1. Discussion on "The Maintenance and Renewal of Permanent Way." 2. Mr. T. A. Rochussen, "On the Performance, Wear, and Cost of Maintenance of Rolling Stock."  
Statistical, 8. Prof. W. S. Jevons, "On the frequent Autumnal Pressure in the Money Market."  
Pathological, 8.  
Anthropological, 8.  
Royal Inst., 3. Prof. Frankland, "On the Non-Metallic Elements."
- WED....** Society of Arts, 8. Dr. Thudichum, "On the Diseases of Meat as affecting the Health of the People."

- Meteorological, 7.  
Royal Inst., 3. Prof. Du Bois Reymond, "On Muscular Contraction."
- THUR....** Royal, 84.  
Antiquaries, 84.  
Linnæan, 8. Mr. George Benthams, "On the Structure and Classification of *Myrtaceæ*."  
Chemical, 8. Prof. Cary Foster, "Heat of Chemical Action."  
Numismatic, 7.  
Royal Society Club, 6.  
Royal Inst., 3. Prof. Frankland, "On the Non-Metallic Elements."
- FRI .....** Society of Arts, 8. Cantor Lecture. Dr. Grace Calvert, "On the Transformation of Neutral Substances." (Lecture II.)  
Philological, 8.  
Royal Inst., 8. G. Macfarren, Esq., "On the Music of the Church of England."
- SAT .....** Royal Inst., 3. Mr. George Scharf, "On National Portraits."

### Patents.

From Commissioners of Patents' Journal, April 6th.

#### GRANTS OF PROVISIONAL PROTECTION.

- Carriage wheels—877—T. Johnston and T. W. Rennie.  
Disease, treatment of—899—W. T. Cooper.  
Electrical indicator—883—W. Moseley.  
Fibrous substances, preparing—869—F. A. Calvert.  
Fire-arms, breech-loading—847—J. Jackson.  
Galvanic batteries—885—W. Moseley.  
Gridiron—829—J. Denis.  
Heavy bodies, raising and lowering—849—R. A. Hardcastle.  
Pins—867—A. and J. Trotman, and T. J. Cole.  
Pistons, packing—865—T. Ironmonger.  
Printing, blocks and plates for—887—J. Ramage and T. Nelson.  
Ships and vessels, closing hatchway skylights of—855—W. R. Mulley.  
Steam engines and boilers—861—W. L. and T. Winans.  
Targets, indicating shot marks on—790—E. R. Wethered.  
Textile fabrics, dyeing and printing—897—J. Higgin.  
Textile fabrics, pencil for writing upon—873—A. V. Newton.  
Textile materials, applying metallic substances to—893—W. E. Gedge.  
Watch and chronometer cases—881—T. Adams.  
Water-carts—889—J. Rawsthorne and E. H. Bayley.  
Wines, preparing—490—E. Drevelton.

#### INVENTIONS WITH COMPLETE SPECIFICATIONS FILED.

- Fire-arms, breech-loading—914—G. T. Bousfield.  
Knitting machine—948—C. A. Shaw.

#### PATENTS SEALED.

- |   |                                |
|---|--------------------------------|
| 2583. J. Priestley, W. Whitworth, and J. Sutcliffe. | 2624. D. C. Pierce.            |
| 2595. G. Voigt.                                     | 2635. G. and A. Deslandes.     |
| 2597. R. Walmsley.                                  | 2652. J. Tangye.               |
| 2600. W. E. Gedge.                                  | 2673. A. Fenton.               |
| 2607. G. G. Rich.                                   | 2696. J. Everard.              |
| 2610. J. H. Johnson.                                | 2708. S. R. Rowe.              |
| 2615. J. J. Parkes.                                 | 2770. R. B. Sanson.            |
| 2622. W. E. Gedge.                                  | 2950. A. V. Newton.            |
|   | 210. J. Stringer and G. Birch. |

From Commissioners of Patents' Journal, April 10th.

#### PATENTS SEALED.

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|--|--|
| 2619. J. Crutchett.  | 2661. F. Wise, E. Field, and E. H. Aydon.  |
| 2620. J. Crutchett.  | 2662. W. Clark.                            |
| 2626. J. Linton.   | 2665. J., S. A., G. E., and F. F. Reading. |
| 2640. M. Cartwright.                                       | 2666. J. B. Robertson.                     |
| 2632. J. U. Bastier.                                       | 2676. F. G. Sicardo.                       |
| 2634. W. C. Cambridge.                                     | 2693. J. Taylor, jun.                      |
| 2649. G. B. Woodruff.                                      | 2699. J. Ballard.                          |
| 2653. W. J. C. Macmillan, J. Mason, and J. V. Scarborough. | 2701. W. Clark.                            |
| 2656. J. L. Hancock.                                       | 2702. W. Clark.                            |
| 2657. J. C. Ridley.  | 2726. J. Wright.                           |
| 2658. C. A. Elliott.                                       | 2895. A. V. Newton.                        |
| 2660. A. J. Mott.  | 3283. W. Clark.                            |

#### PATENTS ON WHICH THE STAMP DUTY OF £50 HAS BEEN PAID.

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|----------------------|--------------------------------|
| 306. T. L. Jacobs.   | 921. P. P. Baly.               |
| 875. J. Macintyre.   | 924. J. Ramsbottom.            |
| 889. W. H. Mitchell. | 929. R. Reeves.                |
| 865. B. Cooper.      | 936. W. and J. Keats.          |
| 870. J. Burwin.      | 938. J. Keats and W. S. Clark. |
| 878. R. A. Brooman.  | 976. G. A. Buchholz.           |
| 879. R. A. Brooman.  | 1085. H. W. Ripley.            |
| 904. A. V. Newton.   | 957. C. Ferrett.               |
| 913. H. W. Ripley.   | 970. C. Turner.                |

#### PATENTS ON WHICH THE STAMP DUTY OF £100 HAS BEEN PAID.

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|--------------------|---------------------|
| 862. W. Owen.      | 899. J. H. Young.   |
| 883. W. Henderson. | 932. J. L. Stevens. |
| 850. E. Fairburn.  | 997. L. P. Porter.  |
| 881. W. Hooper.    |                     |